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(212) 869-8864 (GIII)

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FROM: LAURA A. CORUZZI, ESQ.

PAGES: 10 (including cover page) OUR REF.: 7639-017

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SUPPLEMENTAL COMMUNICATION PURSUANT TO PETITION  
UNDER 37 C.F.R. §§ 1.181, 1.182 AND/OR 1.183

FOR FILING IN:

Application of:

**SPECIAL STATUS GRANTED**

ARTHUR SKOULTCHI

Serial No.: 08/102,390

Group Art Unit: 1804

Filed: August 5, 1993

Examiner: Ziska, S.

For: PRODUCTION OF PROTEINS  
USING HOMOLOGOUS  
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PENY2-355795.1

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as page 10.22*

PATENT 4/25/95

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Cell 3.2**SUPPLEMENTAL COMMUNICATION PURSUANT TO PETITION  
UNDER 37 C.F.R. §§ 1.181, 1.182 AND/OR 1.183**Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Please consider this communication in connection with the Applicant's Petition Under 37 C.F.R. §§ 1.181, 1.182 and/or 1.183 (hereinafter "Rule 181 Petition"), filed in the above-identified application on March 16, 1995 via Certificate of Facsimile.

In the Rule 181 Petition, the Applicant invoked the Group Director's supervisory authority under MPEP § 1002.02(c)4(e) to review the ex parte record, and in particular, the formal sufficiency and propriety of the declaration of Dr. Michael Liskay submitted under 37 C.F.R. § 1.132 (hereinafter, the "Liskay Declaration"). The

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LAURA A. CORU72130,742  
(Reg. No.)

PENY2-358024.1

Applicant proffered the Liskay Declaration as evidence of both the scope and content of the prior art and level of ordinary skill in the art at the time of the invention. In his declaration, Dr. Liskay, a disinterested, unbiased investigator who is eminently qualified in the field, sets forth the factual underpinnings of an obviousness inquiry -- addressing why the art relied on by the Examiner does not suggest the invention, and why one of ordinary skill in the art would not have had a reasonable expectation of success. As part of his analysis, Dr. Liskay establishes the prevailing view of those skilled in the art at the time of the invention -- i.e., that targeted homologous recombination was an inefficient process in mammalian cells, and would not have been expected to be suitable for use in the invention.

The Examiner, who has applied against the claims the very same references evaluated and relied on by Dr. Liskay to support non-obviousness, summarily dismisses the Liskay Declaration as mere opinion, and attempts to substitute her own judgment for that of Applicant's qualified expert. However, for reasons detailed in the Rule 181 Petition, and explained more fully below, the Liskay Declaration should be found formally sufficient and proper under MPEP § 1002.02(c)4(e) because it presents facts and not mere opinion regarding the state of the art at the time of the invention, specifically addresses the prior art references applied against the claims, and explains why one of ordinary skill in the art would not have regarded the invention as obvious. MPEP § 716 at p. 700-84, first column, subparagraph

(2). In re Oelrich, 579 F.2d 86, 198 U.S.P.Q. 210 (C.C.P.A. 1978).

Since the references addressed and relied on by Dr. Liskay to support non-obviousness form the basis for the Examiner's rejection of the claims as obvious under 35 U.S.C. § 103, and since the Examiner cannot substitute her judgment for that of a qualified expert, the Examiner must either (a) allow the claims over the cited art; or (b) at a bare minimum, come forward with an Examiner's affidavit under 37 C.F.R. § 1.107(b) specifying the facts which support her application of the references.

#### THE LISKAY DECLARATION

In his declaration, Dr. Liskay sets forth his credentials (Liskay Decl. ¶1) and establishes that: he has reviewed the above-captioned application, its parent and grandparent applications and is familiar with the invention (Liskay Decl. ¶¶3-6); that the concept of the invention was excellent -- a clever and powerful approach to gene targeting that he wished he had thought of himself (Liskay Decl. ¶7); that he reviewed and is familiar with the references cited by the Examiner which he analyzed in detail (Liskay Decl. ¶¶12-17); that the references do not suggest the invention (Liskay Decl. ¶¶18-24); that he was familiar with the prevailing view held by those skilled in the art at the time of the invention, i.e., that targeted homologous recombination was viewed as an inefficient process in mammalian cells, such that one of ordinary skill in the art would not have been motivated to use this technique to engineer target genes as described and

claimed (Liskay Decl. ¶26); that one of ordinary skill in the art would not have had a reasonable expectation of successfully carrying out the invention (Liskay Decl. ¶¶25-29); and finally, that the invention represents a unique combination of elements that could only be said to be obvious in hindsight (Liskay Decl. ¶30).

#### ANALYSIS

There is no question that Dr. Liskay is a disinterested investigator who is eminently qualified as one skilled in the art -- indeed, Dr. Liskay is an author of one of the references that the Examiner had previously applied against the claims. The Examiner simply dismisses the Liskay Declaration as mere opinion, and has apparently chosen to ignore its content. This is error.

The Applicant proffers Dr. Liskay's declaration to evaluate the prior art relied on by the Examiner, and to place the teachings of the art in the context of the prevailing view among those working in the field at the time the invention was made -- i.e., as evidence of the scope and content of the art and the level of ordinary skill in the art at the time. This is an entirely proper and appropriate use of an expert declaration under 37 C.F.R. § 1.132 and cannot be dismissed as mere opinion by the Examiner. In re Oelrich, 579 F.2d 86, 198 U.S.P.Q. 210 (C.C.P.A. 1978); In re Meng and Driessen, 181 U.S.P.Q. 94 (C.C.P.A. 1974); In re Esterhoy and Hunter, 169 U.S.P.Q. 483 (C.C.P.A. 1971); MPEP § 716.

In Oelrich, the CCPA considered the affidavits of the two inventors and two disinterested professors qualified

in the field which were proffered to show that those of ordinary skill in the art would not have expected the control mechanism claimed to be suitable for use in the invention (a guided missile). Of particular interest here, the expert affiants did not perform experiments, but instead, analyzed the cited art in detail, and explained the state-of-the-art understanding. This is precisely the type of analyses Dr. Liskay has performed and set forth in his declaration in the present application.<sup>1</sup> The CCPA found the Board's criticism of the affidavits for failing to recite factual bases for the conclusions reached unwarranted, and stated:

"To the extent that all of the affidavits express opinions, they are the opinions of men conceded to be of ordinary skill in the art based on information uniquely within their competence bearing on the level of ordinary skill in the art at the time the invention was made."

In re Oelrich, 579 F.2d at 91, 198 U.S.P.Q. at 214-5.

Likewise, in Esterhov and Hunter, the CCPA reversed the Board's obviousness determination giving weight to a declarant's opinion, as an expert in the field, that the technique used in the invention was, according to the prevailing view in the art, "grossly inefficient;" and therefore, the invention was not obvious. In re Esterhov and Hunter, 169 U.S.P.Q. at 486. Thus, Dr. Liskay's analysis of the references applied against the claims, and his description

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<sup>1</sup> The facts in this prosecution are distinct from In re Pike and Morris, 84 U.S.P.Q. 235 (C.C.P.A. 1949); and In re Renstrom, 81 U.S.P.Q. 390 (C.C.P.A. 1949) where the affidavits did not address the art of record, and instead engaged in an evaluation of the advantageous properties of the Appellant's commercial product -- not the invention. The commercial product was not linked to the claims, nor compared to the prior art.

the references applied against the claims, and his description of the prevailing view at the time -- that targeted homologous recombination in mammalian cells was inefficient and therefore was not expected to succeed -- should properly be considered as evidence that the claimed invention is not obvious.

Acknowledging that showings of fact are much preferred to statements of opinion, in Oelrich, the CCPA advised, however, that one should look to nature of the matter sought to be established. The Court recognized that in Oelrich, the expert opinions were introduced on the issue of the level of ordinary skill, which is usually determined by reference to the subjective reaction of persons so skilled. In re Oelrich, 579 F.2d at 91, 198 U.S.P.Q. at 215.

Similarly, in Meng and Driessen, the CCPA took into favorable account the affidavit of one skilled in the art evidencing that he had familiarity and experience with the prior art and the invention, who concluded that the concept of the invention was excellent, and that upon learning of the invention, expressed his surprise that it had not been thought of in the past since the invention was so useful, commercially appealing and unique. In re Meng and Driessen, 181 U.S.P.Q. at 98. In this regard, Dr. Liskay's reaction upon learning of Dr. Skoultchi's invention, i.e., that it was so clever that he wished he had thought of it himself, should be considered an important fact in evidence, of the subjective reaction of persons skilled in the art -- a fact that supports a finding of non-obviousness.

The CCPA, predecessor court of the Federal Circuit has warned against the errors that can be committed in an

obviousness analysis when evidence of the scope and content of the prior art and/or the level of ordinary skill in the art is disregarded. In Oelrich, the Court pointed out that, ". . . the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature," and warned, ". . . [w]hen only the literature is relied upon, occasionally one or both of these factual inquiries becomes distorted." In re Oelrich, 579 F.2d at 91, 198 U.S.P.Q. at 214; emphasis supplied, citations omitted.

The failure of the Examiner to properly evaluate the expert declaration of Dr. Liskay -- a disinterested investigator of impeccable qualifications in the field -- is error, and results in the skewed analysis disfavored by the Court. In his declaration, Dr. Liskay describes the prevailing view held by those of ordinary skill in the art at the time, i.e., that targeted homologous recombination was extremely inefficient in mammalian cells. Dr. Liskay concludes, therefore, even if the invention had been suggested to one skilled in the art, there was no reasonable expectation of success. To show the modest results achieved, and lack of success in the field, Dr. Liskay cited the Smithies 1985 reference<sup>2</sup> as the only study he was aware of in this time period (1989), which reported that targeted homologous recombination was accomplished in mammalian cells -- however, Dr. Liskay points out, the results were quite modest.

The Examiner, seizing upon the one reference which reports a modicum of success -- an aberration in a sea of

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<sup>2</sup> Smithies et al., 1985, Nature 317:230-234, of record.



In view of the foregoing, the Group Director should find that the Liskay Declaration, which was proffered to show the scope and content of the art and the level of ordinary skill in the art, is sufficient as to form, and proper under MPEP § 1002.02(c)4(e) and § 716. In sum, the Liskay Declaration cannot be dismissed as mere opinion, since as an expert in the field, Dr. Liskay analyzed the art relied on by the Examiner; described the prevailing view in the art at the time of the invention (i.e., that targeted homologous recombination, an inefficient process in mammalian cells, would not be expected to work); and explained why the art does not suggest the invention, and why one of ordinary skill in the art would not have had a reasonable expectation of

success. In re Oelrich, supra; In re Esterhoy and Hunter, supra; In re Meng and Driessen, supra.

In the present case, the art applied against the claims is the very same art evaluated by Dr. Liskay and used to support the non-obviousness of the claimed invention. Therefore, the different conclusion reached by the Examiner can only be due to different analyses and interpretations of the prior art teachings, and what the teachings would have meant to one of ordinary skill at the time of the invention. Here, the Examiner's analysis must give way to that of Dr. Liskay. Although the Examiner is entitled to her own opinion, and while much of the criteria involved in an obviousness determination is subjective in nature, an expert's evaluation in the field is entitled to more weight. In re Zeidler, 682 F.2d at 966. Simply put, the Examiner cannot substitute her own judgment for that of an established expert in the art. In re Zeidler, 682 F.2d at 967. Therefore, the Examiner should allow the claims and initiate the requested interference, or at a minimum, come forward with a showing of facts by way of an Examiner's affidavit under 37 C.F.R. § 107(b) that support the Examiner's reasons for rejection.

Respectfully submitted,

Date: March 23, 1995

S. Leslie Misrock 18,872  
S. LESLIE MISROCK (Reg. No.)

Date: March 23, 1995

Laura A. Coruzzi 30,742  
LAURA A. CORUZZA (Reg. No.)

PENNIE & EDMONDS  
1155 Avenue of the Americas  
New York, New York 10036  
(212) 790-9090